

REMARKS

The undersigned acknowledges the interview held with Examiner Kaplan on March 30, 1998. In attendance were Mr. Belkin and the undersigned.

As required by the Examiner a new declaration is being submitted.

The drawings were objected to for not showing the heater and microwave of claims 17, 18, 20, and 21. These claims, which were rejected on the same grounds, have been canceled.

Also with respect to the drawings, as discussed with the Examiner and the Examiner's supervisor at the Examiner's interview, Applicant has replaced the existing Figure 10 with the enclosed new Figure 10. No new matter has been added by the rearrangement of the elements of Figure 10 in a more clearer visual presentation of the elements therein.

Applicant has also amended Claim 2 to more particularly point out and distinctly claim the invention.

Furthermore, throughout the claims, Applicant has deleted the words "low voltage" with respect to direct current (DC) electrical power, since, while a power supply herein might be a low voltage DC power supply, if it were combined other low voltage DC power supplies so that the aggregate voltage of all the DC power supplies together is an aggregate which exceeds the

normal definition of "low voltage", namely, 26.2 volts.

With respect to the prior art cited by the Examiner, it is noted that Claims 1, 6, 9, 12, 13, 16 and 19 were rejected as being anticipated by Edwards et al.

Claims 3-5, 8, 10, 15, 17, 18, 20, and 21 were rejected as being unpatentable over the above Edwards reference in view of Okamoto et al.

Claims 2 and 7 were rejected as being unpatentable over Edwards et al in view of Peterson. Claims 11 and 14 were rejected as being unpatentable over Edwards et al in view of Alenduff et al.

Edwards et al discloses an uninterruptible lighting system in which a battery is employed to provide normal power to a lighting system and an AC power source is employed to keep the battery charged. As noted in col. 4, lines 6 et seq., a ballast 8 is employed to convert the DC power supplied from the battery to a suitable AC voltage for the fluorescent lighting elements.

In the present invention, the lighting fixtures require DC electrical power. Instead of converting the AC to DC at each fixture as is now the usual case, the AC electrical power is converted to DC electrical power, such as for example, low voltage DC electrical power at one location (i.e., by the power control means) and DC electrical power is distributed to the lighting fixtures. The battery is a standby and supplies power

to the lighting system only when there is an AC power outage, or, through a voltage change of the power control means, as noted in Applicant's related parent patent application, now U.S. patent no. 5,500,561. The power control means maintains the battery fully charged at all times.

Thus, there is a fundamental difference between Edwards et al and the present invention.

Okamoto et al shows an electric power supply system which includes loads other than lighting systems and a power source which includes a photovoltaic (PV) array.

Peterson was cited for the plurality of control units for use with loads in different rooms. The patent teaches also a system which will work with both AC and DC electrical power.

Alenduff et al was cited for the use of a supplemental source of power.

In view of the excellent art cited by the Examiner, the claims have been revised to distinguish over the art of record.

Claim 1 has been amended to recite that the battery supplies DC only during an AC electrical power outage as compared to Edwards et al where the battery is the primary source of power. This is a fundamental difference in mode of construction and operation. Another way in which claim 1 differs from Edwards et al is in reciting that the lighting fixtures require DC electrical power. In Edwards et al the DC power is changed to AC

power for use by the lighting fixtures. This arrangement is believed to be inefficient and effectively is corrected in the present invention.

Independent claim 4 which recites the addition of photovoltaic power to the power control means has been amended to recite the battery as a standby to provide low voltage electrical power when there is an AC power outage and is maintained fully charged by the power control means. In Okamoto et al the photovoltaic (PV) cell supplies power to an air conditioner and a commercial power source is employed to supply power when there is insufficient power from the PV. As recited in claim 4, the PV and AC sources of power work together with the power control means reducing the electrical power taken from the grid source by the amount supplied by the PV source. In Okamoto the AC source is in effect the standby, while in the present invention the battery is the standby.

Claims 5-8 have been replaced by new claims 22 and 23.

Claim 22 recites the high efficiency lighting system with DC lighting fixtures distributed throughout a building and a power control means in a single location for producing the DC electrical power for distribution to all of the lighting fixtures. In contrast, in present systems, AC power is typically distributed to the lighting fixtures, and each fixture converts the AC to DC. This is a highly inefficient system which the

present invention would replace. Dependent claim 24 adds the use of a battery to supply the low voltage DC electrical power on a standby basis.

Claim 9, as amended, is similar to claim 22 except that the arrangement is not limited to lighting fixtures. There are many other electrical loads which require DC electrical power and typically each one would convert the AC to DC. Claim 9 now also recites the battery on a standby basis which supplies DC electrical power through a voltage change of the power control means. This claim distinguishes over Edwards et al and the remaining art of record for reasons already set forth.

Claim 13 has been amended to recite that the storage battery delivers DC power when a predetermined amount of DC power is not available.

It is believed that the claims in their present form clearly distinguish over Edwards et al since this patent has an entirely different type of arrangement. The present invention relates to a highly efficient electrical distribution system with battery back up for loads requiring DC electrical power. The patent uses a battery to supply DC power to loads requiring AC on a normal basis, and the AC source keeps the battery charged. The DC from the battery is converted to AC for use by the loads. Thus there are fundamental differences between the two systems.

Furthermore, Applicant submits the within Section 131

Declaration of Applicant William Wilhelm to assert that Okamoto et al should not be a prior art reference, since Okamoto's earliest filed corresponding Japanese patent application was filed in April, 1991, which is three months after Applicant's first parent patent application was filed in January, 1991.

The Section 131 Declaration further notes that although the above identified patent application being presently considered by the Examiner is a continuation-in-part of this parent patent application, which was filed on March 19, 1997, after Okamoto et al, Applicant only relies upon material present in Applicant's first parent patent application, which was filed at least as early as January, 1991 under serial no. 07/638,637, to distinguish from Okamoto et al, not any new matter added when the present application was filed on March 19, 1997.

Therefore, if Applicant is correct in his comparison of the earlier filed material in Applicant's parent patent application filed in January, 1991 with the later filed Okamoto patent, then Okamoto should not be cited as a reference.

As a result, the rejection of Claims 3-5, 8, 10 and 15 should be therefore withdrawn. Applicant has therefore rewritten Claims 3-5, 8, 10 and 15 as originally filed as new Claims 25-33 which Claims should also be allowable if Okamoto is dropped as a reference because of Applicant's Section 131 Declaration enclosed herein.


Applicant also adds new Claim 24 and 34-35 wherein the storage battery is used as a load leveler in addition to being an uninterruptible power supply. Applicant has amended the specification at page 4 to add this load leveler feature, which is shown in Applicant's parent patent application, now US Patent No. 5,500,561.

Moreover, Claim 36 is similar to Claim 1, except that instead of the battery operating during a power outage, the battery delivers DC power to the load when there is a voltage change of the power control means.

The Examiner is requested to call the undersigned in the event it is deemed that some changes are required to obtain allowance of the claims.

A favorable action is solicited.

Respectfully submitted,


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